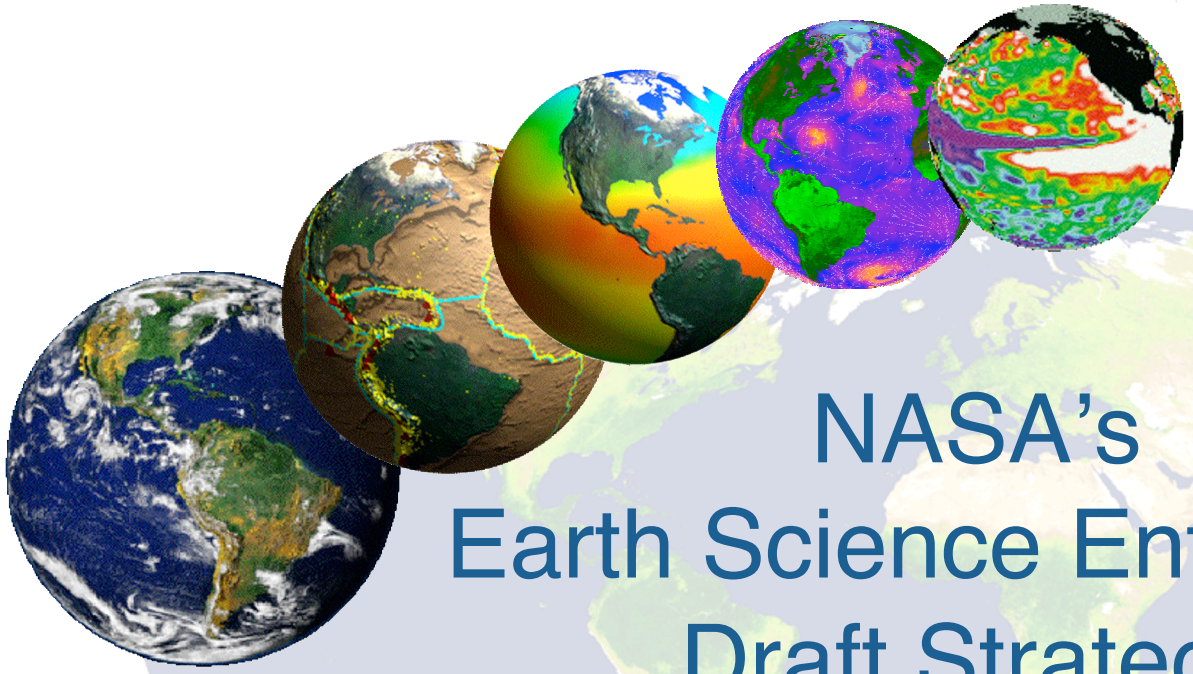


NASA's Earth Science Enterprise Draft Strategy

ESSAAC Meeting
July 16, 2003

Requirements & Schedule

- Implement the NASA Strategic Plan
  - Vision, Mission, Goals & Objectives
  - "…as only NASA can" filter
- Articulate a compelling vision for Earth Science at NASA
- Communicate ESE direction and priorities to our stakeholders, team members, and partners
- Complete in August for publication in September

NRC View of a Good Strategic Plan for a Large Research Program

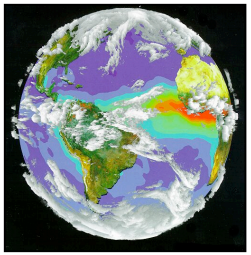
- Elements of a strategic plan from "Planning Climate and Global Change Research" (NRC 2003)
  - Clear and ambitious guiding *vision* of the desired outcome
  - Unambiguous and executable *goals*…
  - Clear timetable for accomplishing the goals and *criteria for measuring progress*;
  - *Assessment* of whether existing programs are capable of meeting these goals…
  - Set of explicit *prioritization criteria* to facilitate program design and resource allocation
  - *Management plan* that provides mechanisms for ensuring goals are met…

(*Italics* as written in the report)

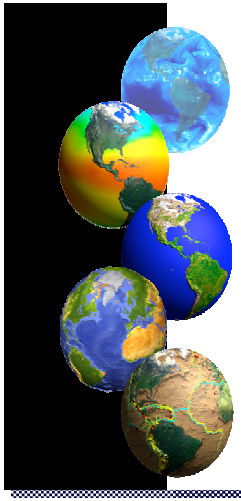
ESE Strategy Documents

ESE Strategy

Research Plan



- *Observing approach*
- *Computational modeling approach*



Technology Plan

Data & Information Management Plan

Applications Plan

Education Plan

Issues Identified in ESSAAC Review

- Issues identified in ESSAAC review
  - Essential contribution of space-based observations to Earth System Science
  - NASA's role vis-à-vis other agencies and the meaning of "as only NASA can"
  - ESE role in modeling
  - Science / technology / applications balance in the Beyond the Horizon section
  - Science community ownership

Issue: Enabling Earth System Science

- Some members commented that Earth System Science could proceed without space-based observations

- Our view is:
  - Remote sensing from space is essential; while Earth science certainly pre-dates NASA, Earth system science was made possible by satellite observation
  - NASA pushed hard to foster interdisciplinary science in the community

Issue: Roles & Dependencies

- In various places, members commented on NASA's role vis-à-vis other agencies

- The "as only NASA can" is applied as follows:
  - In Science, NASA leads in those areas where remote sensing is essential. We support, where our expertise can help, other Agencies that have leadership in other areas, such as human dimensions of global change
  - In Applications, we "benchmark" (measure the improvement thru use of) NASA ESE observations and results in sibling Agencies' decision support systems for selected applications under formal agreements
  - In Observing Systems, we seek to transition selected observing responsibilities and technologies through joint missions where the operational partner has a commensurate investment & strategy

Issue: NASA's Role in Modeling

- Some members asked NASA to more clearly articulate its role in modeling, and were unfamiliar with the Earth System Modeling Framework (ESMF) activity

- To be address in Research presentation

Issue: Science Focus in "Beyond the Horizon"

- Several members commented that this section emphasized applications and technology over science

- We need ESSAAC's help in this area. We invite you to suggest some text to achieve the desired emphasis

Issue: Science Community Ownership

- The broader science community should convinced to adopt the strategy as its own

- ESSAAC can be of great help here; refer to Science program agenda item for discussion